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FROM: *P + DS*

DATE: *24 Mar 64*

	TO	INITIALS	DATE
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ASST FOR ADMIN			
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REMARKS

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P&DS 71-64

19 March 1964

MEMORANDUM FOR: The Executive Director, NPIC
THROUGH : The Assistant for Plans and Development
SUBJECT : Special Sensor Coordination

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1. In response to your verbal directive to establish a special sensor coordination office in the Plans Branch, P&DS, [] is designated to handle these matters pending a formal NPIC Notice which will be submitted shortly for your approval.

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2. In the interim, steps have been taken to set-up a coordination mechanism in the Plans Branch. The first step was to orally inform the pertinent division and staff chiefs that a special sensor coordination office is to be established, to explain the purpose of the coordinator and to request each chief to designate an individual as the focal point for special sensor matters for his component. Together these individuals compose an informal special sensor working group, as follows:

Operations Staff -
TID -
PID -
PAG -
AS/TB -
DIA -
CSD -
P&DS -
Plans Staff Coordinator - []

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3. On 6 February a brief meeting of the working group was held in the P&DS conference room for the purpose of discussing the function and initiating the action of the group. Those of the group who were not present were briefed later. The following are the principal points covered:

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a. In order to expedite matters, the working group will function on an informal basis until formal action becomes necessary. Meetings of the entire group will be held only when required. Teams of specialists will be formed to carry out tests and evaluations.

b. The working group will be concerned with all image-forming sensors other than panchromatic (black and white) photography. This will include color photography, night light-pattern photography, and night (ambient light, electronic illumination, etc.) photography as well as infrared, radar, microwave, etc.

c. As soon as sufficient material and facts concerning any of the sensors are available for well-considered studies, evaluations will be made by in-house experts. The results will be forwarded to the Director through the Executive Director recommending the position that the NPIC should take with regard to the value the particular sensor imagery has to exploitation.

d. A central file of material and information on special sensors and multi-sensors will be maintained in Plans Branch, P&DS. Copies of all incoming and outgoing communications as well as copies of studies, reports, evaluations, contact reports, etc. are to be forwarded to Plans Branch for filing. Reference material on significant activities of current interest will be maintained in Plans Branch, but because of the large volume of reference material available, most of it should be kept in the CSD/Ref. library.

e. In order to initiate the above files members of the group were requested to forward to [] copies of all papers and records concerning activities in the sensor field now in their component's files.

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f. [] briefed the group on his proposal to obtain sequential day and night imagery from a combination camera and infrared scanner to determine changes in target activity. It is possible that the DD/S&T will provide the operational support for this project.

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Since inputs from the NPIC will be of value in this and similar projects it was requested that the PAG and the PID compose lists of those types of target information which would be of value to photo interpretation but which are not sufficiently obtainable from current black and white photography. The lists are to be submitted to [] as soon as completed.

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g. The Plans Staff is compiling information on known efforts in the special sensor field that are being carried on by the official community outside of the NPIC. Members of the group were asked to submit to Plans Branch such information to include the name of the organization, name of the project, location of the effort, nature of the effort, and names of individuals to contact. This information will be consolidated and distributed to the working group. Such a list should be of value in determining the state of the art, what is being done by whom in the official community and, through them what is being done by the non-official community.

4. For the sake of mutual understanding in-house the term "special sensors" will be used in referring to the various sensors as singular devices, and the terms "multi-sensors" or "multi-band sensors" will be used in referring to two or more types of special sensors being used simultaneously or in combination.

5. A report on the USGS/NPIC survey of Hawaiian volcanoes by the use of infrared and panchromatic imagery is being circulated to pertinent NPIC components for study and comments. A consolidated report on the comments will be submitted to the Director.

6. A study by [] on multi-band imagery of Mudlake Bog, Michigan is being evaluated by PID, TID, and P&DS and their responses concerning the possible values of the paper will be submitted to the Director by 18 March.

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7. Several individuals in the center have done considerable work with special sensors. They are unanimous in stating that special sensors and multi-sensors probably can contribute information of intelligence value in conjunction with panchromatic photography. However, they admit that this prognosis is based more on intuition than fact. Until we can obtain considerable significant material from any special sensor or multi-sensor device we cannot determine the state-of-the-art nor can we make a meaningful appraisal of its value to photo interpretation and intelligence.

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8. The following, are the current proposals for research and development in special sensors in which the NPIC has an interest or is participating.

a. Sequential interpretation of consecutive daylight photography and night time thermal infrared imagery over the same target areas for a period of a week. This study is to determine how best to exploit day and night intensive reconnaissance data in an area of suspected military build-up. The DD/S&T will provide operational support and the Texas Instrument Company is contracted for technical aspects.



b. Research to determine if target activity levels can be interpreted reliably from photography of light patterns at night. Targets to be included in the first study will include ports, railroad yards, airfields, truck terminals, military storage depots, and military motor pools. This research is an extension of significant work in this field which has been already completed by the contractor, Itek.

c. A project is contemplated to perform a research project in the field of photo-radar correlation. The total objectives of this project have not yet been clearly established although there should be a research objective completed by mid-April.

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Chief, Plans Branch, P&DS
NPIC

Distribution:

Orig. and 1 - Addressee
1 - Subj. File
8 - To all members of working group
1 -  Chrono File
1 -  Chrono

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